**Bio 1 review/ preview. . . Mitosis, Meiosis**

**Directions:** Read and fill in this packet **without** your neighbor’s help. You may look in your notes or a textbook only AFTER trying to complete it without them.

1. There are three names for DNA visible in the cell. Describe what each looks like and what the DNA is doing when it looks like that:

*Chromatin*

*Nucleolus*

*Chromosomes*

**Mitosis:**

2. Why do cells need to make copies? List at least three reasons discussed in class:

1

2

3

3. Routine cell copying where you end up with two clones is called: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. The original cell is called the \_\_\_\_\_\_\_\_\_\_\_\_ cell while the two clones are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells.

5. In what phase does a cell spend the majority of its time? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. What is going on in this phase?

6. What does the cell look like?

7. Then the cell starts to divide. . .Draw (color if you want), label and describe in words each of the 4 phases of cell division here:

1.

2.

3.

4.

Meiosis is on the back

**Meiosis:**

8. How many *genes* for each trait does the normal cell have? \_\_\_\_\_\_\_\_\_\_\_ . This is described as the cell being *diploid*. Where did each gene come from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. What is a gene?

10. Almost all of the cells in your body are diploid. There are a precious few that are *haploid*. What does haploid mean?

11. Which cells are haploid? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Explain why these particular cells need to be haploid:

13. The process of cell division that reduces a cell from diploid to haploid is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . Since it is reducing the genetic material by ½ it is also called *reduction division*.

14. How many pairs of chromosomes do **you** have? \_\_\_\_\_\_\_\_\_

15. That means a total of how many individual chromosomes? \_\_\_\_\_\_

16. You now know these cell parts:

Cell membrane

Nucleus

Nucleolus

Chromosome

Ribosome

Mitochondria

Chloroplast

Could you tell me what they look like, where they are located, and what they do? If not , figure it out!